

WHAT IS CLAIMED IS:

1. A video data transmitting/receiving method which
uses a transmission line for transmitting video data
5 constituted of three signals of a 4:2:2 format, comprising:
allocating 3-channel video data of two pixels
constituted of three signals of a 4:4:4 format to data of the
4:2:2 format of three pixels to convert the video data into
2-channel video data, mapping the converted video data in an
10 effective image area defined by the 4:2:2 format, and
serializing video data obtained by the mapping to transmit
the data through the transmission line, on a transmission
side; and

taking out the 2-channel video data from the received
15 video data, and allocating the video data of three pixels to
data of the 4:4:4 format of two pixels to restore the 3-channel
video data constituted of the three signals of the 4:4:4
format on a reception side.

20 2. A video data transmitting/receiving method
according to claim 1,

wherein the video data is transmitted through a
plurality of transmission lines if the number of horizontal
effective pixels of the video data constituted of the three
25 signals of the 4:4:4 format exceeds $2/3$ of the number of
horizontal effective pixels of the 3-channel video data
constituted of the three signals of the 4:2:2 format, and

the number of transmission lines is set to an integer
value obtained by rounding up decimals of a value which is
30 obtained by an expression:

(number of horizontal effective pixels of the video
data constituted of the three signals of the 4:4:4
format) \div (number of horizontal effective pixels of the
3-channel video data of the three signals of the 4:2:2 format)

×3/2.

3. A video data transmitting/receiving method according to claim 1,

5 wherein the three signals of the 4:4:4 format and the three signals of the 4:2:2 format are three signals selected from three signals of RGB, three signals of Y, Pr, Pb, and three signals of Y, R-Y, B-Y, respectively.

10 4. A video data transmitting/receiving method which uses a transmission line for transmitting video data constituted of three signals of a 4:2:2 format, comprising:
allocating 3-channel video data of two pixels constituted of three signals of a 4:4:4 format to data of the
15 4:2:2 format of three pixels to convert the video data into 2-channel video data, mapping the converted video data in an effective image area defined by the 4:2:2 format in a manner of filling the effective image area with data rows corresponding to scanning lines sequentially from a head
20 address of the effective image area, and serializing video data obtained by the mapping to transmit the data through the transmission line, on a transmission side; and

cutting out a data row from the transmitted video data for each predetermined pixel to take out the 2-channel video
25 data, and allocating the video data of three pixels to data of the 4:4:4 format of two pixels to restore the 3-channel video data constituted of the three signals of the 4:4:4 format on a reception side.

30 5. A video data transmitting/receiving method according to claim 4,

wherein the video data is transmitted through a plurality of transmission lines if the number of effective pixels of the video data constituted of the three signals of

the 4:4:4 format exceeds 2/3 of the number of effective pixels of the 3-channel video data constituted of the three signals of the 4:2:2 format.

5 6. A video data transmitting/receiving method according to claim 4,

 wherein the three signals of the 4:4:4 format and the three signals of the 4:2:2 format are three signals selected from three signals of RGB, three signals of Y, Pr, Pb, and
10 three signals of Y, R-Y, B-Y, respectively.